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ABSTRACT

The Water in Africa Project was realized over a 2-year period by a team of Peace Corps volunteers, World Wise Schools (WWS) classroom teachers, and WWS staff members. As part of an expanded, detailed design, resources were collected from over 90 volunteers serving in African countries, photos and stories were prepared, and standards-based learning units were created for K-12 students. Intended for use with middle school students, this unit takes students on a WebQuest water safari through several African countries, using the Peace Corps Water in Africa site as a WebQuest. Students complete the Web Quest by conducting research about the relationship of physical and human systems. They use the collected data to prepare a formal report for Peace Corps that will assist in the creation of a training video for volunteers in Africa. The unit can be used in geography, language arts, and technology classes. Seven class periods of 45 minutes each are suggested. The unit lists materials needed, outlines applicable standards, poses discussion questions, and lists student objectives. It details day-by-day procedures for the teacher and provides assessment activities and follow-up/enrichment activities. (BT)

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Water in Africa

Water Safari, A Journey of Life

http://www.peacecorps.gov/wws/water/africa/lessons/

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Water in Africa is a project of Peace Corps World Wise Schools.

2000

Funded through a grant from the Department of Education, the Water in Africa project was realized over a two year period by a team of Peace Corps Volunteers, World Wise Schools' (WWS) classroom teachers, and WWS staff members. Inspired by an idea of one creative WWS teacher, the project eventually expanded into a detailed design. The development and implementation of the design included the collection of resources from over 90 Volunteers serving in African countries, the preparation of those photos and stories, and the creation of standards-based learning units for K-12 students.

Water Safari, A Journey of Life

Description:

This lesson takes students on a WebQuest water safari through several African countries, using the Peace Corps Water in Africa site as a WebQuest. Students complete the WebQuest by conducting research about the relationship of physical and human systems. They use the data they have collected to prepare a formal report for Peace Corps that will assist in the creation of a training video for Volunteers in Africa.

Timeframe: Seven 45 minute periods

Curricular Areas: Geography, Language Arts, Technology

Grade Level: Grades 6-8

Materials

- Access to the Water in Africa Web site at: http:www.peacecorps.gov/wws/water/africa
- link Water Safari: A WebQuest to the Water in Africa Web Site (one or more copies for each group)
- Data Collection Document (one copy for each group)
- Evaluation Rubric
- Personal student journals
- Electronic presentation software such as: Power point or HyperStudio (optional)

Standards

Geography Standard 4-- Understands the physical and human characteristics of place

Benchmark-- Knows the human characteristics of places

Benchmark-- Knows the physical characteristics of places

Geography Standard 14-- Understands how human actions modify the physical environment

Benchmark-- Understands the environmental consequences of people changing the physical environment

Benchmark-- Understands the ways in which human-induced changes in the physical environment in one place can cause changes in other places

Geography Standard 15-- Understands how physical systems affect human systems

Benchmark-- Knows the ways in which human systems develop in response to conditions in the physical environment

Language Arts Standard 1-- Uses the general skills and strategies of the writing process

Benchmark-- Uses a variety of prewriting strategies

Benchmark-- Uses a variety of strategies to draft and revise written work

Benchmark-- Uses a variety of strategies to edit and publish written work

Benchmark-- Evaluates own an others writing

Benchmark-- Writes expository compositions

Language Arts Standard 4-- Gathers and uses information for research purposes

Benchmark-- Organizes information and ideas from multiple sources in systematic ways

Language Arts Standard 7-- Demonstrates competence in the general skills and strategies for reading a variety of informational texts

Benchmark-- Uses new information to adjust and extend personal knowledge base

Benchmark-- Draws conclusions and makes inferences based on explicit and implicit information in texts

Benchmark-- Differentiates between fact and opinion in informational texts

Language Arts Standard 8-- Uses listening and speaking strategies for different purposes Plays a variety of roles in-group discussions (e.g., active listener, discussion leader, facilitator)

Technology Standard 2-- Knows the characteristics and uses of computer software programs

Benchmark-- Uses advanced features and utilities of word processors

Benchmark-- Knows the common features and uses of desktop publishing software

Essential Questions

How do human systems develop in response to water conditions in the physical environment?

How do human actions with water modify the environment?

Objectives

Students will:

- complete a WebQuest to African countries of their choosing to research two essential questions.
- read and collect various forms of information from the Water in Africa Web site
- choose countries, photos and stories upon which to base their recommendations.
- write a formal persuasive report.
- work together and play various roles in their groups.

Procedure

Procedure: Day One

Please note: This unit was written so that the student documents can be used on-line or as a hand-out. If you have access to enough computers for your students to work on-line, have them download the PDF file of the WebQuest and save it to their computers. They will then have access to it at the same time that they are using the Water in Africa site. If you prefer, you can make print copies of the file in addition to or as an alternative to using it on-line.

1. Begin the lesson by asking students to define "safari" and ask if anyone in the class has ever been on a safari. (Safari is a Swahili word that means journey, in Arabic it is Safar, a journey). Hold a discussion about safaris asking questions such as: Why do people go on safaris? Where do people usually go--highly populated familiar places, or unknown places? What do people do when they are on safari? What skills, tools, or equipment do you need on a safari? Bring out ideas that people go to visit unexplored territory places or places they have never seen before to learn more about them. People on safari are generally adventurous and open-minded.

2. Ask students to recall camping trips, school field trips, and family vacations. How did they plan the trip, and what decisions needed to be made before the journey? Record responses on the board. Next, ask students if they have ever kept a journal. Ask them to identify what they have written about in their journals. Record their responses next to the safari list. These lists can later be used as a resource for ideas, and inspiration.

3. Read to the class the actual journal entries from the book, How We Crossed the West, The Adventures of Lewis and Clark, by Rosalyn Schanzer, or read aloud a journal entry from the Lewis and Clark Web site: http://www.lewisandclark.org/pages/storya.htm. A personal travel journal or other explorer's journal could also provide examples.

4. Discuss how a journal reflects an explorer's perception of a place. Provide more examples of journal entries as needed. Ask students what types of writing are used in the journal. Their responses might include dates, descriptions of a place or an event, personal feelings, narrow escapes, quotes, etc. Ask them to identify specific entries from the journals that you read as examples of descriptive and narrative writing that show personal

experiences.

5. Explain to the class that for the next few days they will go on a virtual safari to Africa through a WebQuest assignment. Either have the students download the WebQuest document and save them to their computers, or distribute printed copies. Have the students read through the Introduction and the Tasks (pages 1 and 2 of the WebQuest document). Tell the students that this is a simulation, and that although their reports will not be sent to Peace Corps, they will be considered and reviewed by their classmates and by other adults.

6. For homework, have your students find out as much as they can about Peace Corps. Tell them they may use use encyclopedias, books, and talk to their parents and other adults. They are also free to the Internet; give them the URL of the Peace Corps Web site, and of Kids World.

   http://www.peacecorps.gov
   http://www.peacecorps.gov/kids/

Procedure--Day Two

1. Discuss what the students have learned about Peace Corps through their homework assignment. Make sure the students understand that a Peace Corps Volunteer makes a commitment of two years. Prior to the start of the two-year period, they are involved in three months of training in the country where they will be serving to introduce them to the country, the culture, and their job.

2. Remind students that they are on a WebQuest to investigate the human systems that have developed in response to water conditions in Africa, and how those human systems affect the environment. Stress that this is vital information for Volunteers to know prior to the initiation of their work.

3. Distribute the Data Collection Document (PDF or RTF). Divide the students into groups of three and explain the three job functions for each group. Direct the students to Day One of the WebQuest, and have them proceed with the assignment. Give assistance and clarification as needed.

4. Ten minutes before the end of the class, ask the groups to report on their day's work, and discuss any difficulties or questions that the students have.

Procedure--Day Three to Day Seven

1. Check on the progress of each group's Data Document and be sure the students are also writing in their personal journals. Provide clarification and encouragement. Assist students to use the resources appropriately. Make sure they understand that this is a very small sampling of people and places, and should not be considered to be representative of entire countries, the continent of Africa, or the way that all Peace Corps Volunteers live.

2. Groups that have collected all data necessary may begin to outline and construct their reports for Peace Corps. Have your students follow the writing process techniques recommended by your school or district.

3. You may wish to have your students create a presentation as well as a written document. Electronic presentation software such as PowerPoint or HyperStudio can be used for this purpose. Students can download the actual photos they have chosen and include them in the presentation, as well as the Volunteers' quotations.

Procedure--Day Six or Day Seven

1. Have the students from one group share their completed reports with another group. Ask the groups to use the Evaluation Rubric in their WebQuest packets to evaluate each other's report. Collect the evaluations.

Assessment

1. Conduct a class discussion about the essential questions that the students have been investigating. Make sure they understand that the issue of water are integral to sustainable life and are very complex. Use local examples to compare the impact of man's use of water on the environment.

2. Use the Evaluation Rubric to evaluate the final group reports. Have other adults, teacher or parents, read the reports and make comments on the content and groups' recommendations.

Follow-up/Enrichment Activities

Use this unit as an integration of technology into the curriculum. Instead of having the students use a paper data document, have them use the RTF format as word processing document, as well as the PDF version of the WebQuest. Use word processing software or presentation software for their reports to Peace Corps.

Choose one or more of the students' reports and create a simulation where students play the roles of Peace Corps staff members involved in creating a training video. Roles might be Project Director, Videographer, Sound, Graphics, Content Editor, and Writer. Have the students present to this board, and then make plans to create the video. Other students could role-play the Volunteers, and still others could do further research on the country and the Peace Corps. Finally, have them create a video.

Additional Resources

How We Crossed the West, The Adventures of Lewis and Clark, Schanzer, Rosayln, National Geographic Society, 1997.

Lewis and Clark 's Journal web site at http://www.lewisandclark.org/pages/storya.htm

Explorers, Kids Discover Magazine, February 1994.

African Kingdoms, Kids Discover Magazine, January 1999.

About the Author

Dany Ray is a teacher for the gifted grades 5-8 at Washington Middle School, Cairo, Georgia. Dany wrote the original unit and pilot tested it with her students. Maureen Wilson-Jarrard, an education technology specialist, edited and revised the unit in the WebQuest format. Dany commented on the pilot testing of this unit: "Students had had experience doing WebQuests and so this unit was familiar territory. The challenge was to stay focused on what they were doing at the site, recording facts, comparing concepts, sketching and writing down ideas for the final product. Overall this lesson pulled it all together for the students. There are so many countries on the site, and each delivered first hand, primary information on water to the students. They felt an attachment to volunteers who contributed views and photos. They discussed what they found posted by a volunteer in Togo on water, and contrasted it to what was posted from one in Kenya. They also began to see some commonality between themselves and the people of Africa. At the conclusion of the pilot testing, I asked my students to tell me what they liked or disliked about the unit, what could other students learn from it, and what they would change. They said that integration of the computer was good, it kept their interest. They liked having the maps on the site ready to access whenever they were unsure. The PCV photos were quite interesting, even the ones with the water-borne worms. This site was real, not created by some firm, but real views, and insights."

Evaluation of Your Recommendations to Peace Corps

Group Name_____

Group Members _____

Area	Points	Descriptors
Content Accuracy	**/20**	The students: • Showed by their completion of the data document that they have an understanding of the physical and human characteristics of places
Content Depth	**/40**	The students: • Showed by their choice of photos and quotations that they had an understanding of how human systems develop in response to water conditions in the physical environment • Showed by their choice of photos and quotations that they had an understanding of how human actions with water modify the environment.
Process	**/30**	The students: • Participated in all job functions cooperatively • Used the general skills and strategies of the writing process to complete the report (pre-writing, drafting and revising, editing and publishing) • Used complete sentences, parts of speech, spelling, punctuation and capitalization appropriately
Presentation and Neatness	**/5**	The students: • Used word processing software or neat handwriting to produce an attractive and clean document
Creativity	**/5**	The students: • Produced an attractive and unique cover for the report
Total	**/100**	Comments:

Introduction Tasks Process Resources Evaluation

Resources

Main Resources

Water in Africa homepage http://www.peacecorps.gov/wws/water/africa

Water in Africa Resources

http://www.peacecorps.gov/wws/water/africa/resources/index.html

Additional Links

Letters from Mali http://www.peacecorps.gov/wws/letters/mali/index.html

National Geographic Xpeditions

http://www.nationalgeographic.com/xpeditions/main.html (Pay close attention to Physical Systems and Human Systems in this hall

World Wise Schools Videos and Teacher Guides

http://www.peacecorps.gov/wws/videos.html

"Destination Cameroon"

"Destination Lesotho"

"Destination Senegal"

your document, you may not skip lines on the final product. There may not be any spelling or grammar errors, since this is going to an important federal agency.

5. Your group should decide how to create the cover of the document. You may download photos and print them, (see http://www.peacecorps.gov/wws/water/africa/help/) you may draw a design, or you may use an artistic idea of your own. One person may create the cover, or it can be a group effort.

6. All the members of your group should have proofread your final draft before submitting it to your teacher.

Days Six and Seven

1. You now have collected all your data and recorded all your personal impressions of it. Now it is time to plan the report that you will submit to Peace Corps. The deliverable requires a two-page summary of your procedures and the reasons for your recommendations. The lists--countries, photos and volunteers--should be on a separate page. Additionally, in order to make a good impression on your clients, you will want to create a cover for the document that reflects the importance of the topic.

2. Complete the outline on page four and five of your data document to help you write your report. The Data Transcriber is the person who will be doing the writing, but the group will decide what is to be written.

3. After your outline is complete, you should begin to write the first draft of your document. Follow your outline, but be sure to include some of your own impressions from your personal journal. Your document will be evaluated using the rubric found on the last page of this document. Therefore, it would be prudent to pay close attention to the elements listed on the rubric.

4. You may use a word processor, or if that is not possible, you may submit your report in clear, neat handwriting. If you are using a word processor, your document should be double-spaced, and you should Times New Roman font size 12. If you are handwriting

Days Four and Five

1. Now that you have chosen the photos that you will recommend to Peace Corps, you are responsible for listing no more than five Volunteers that your group believes should be interviewed further. Your decision should be based on something they have written in the stories included in the Water in Africa Web site. To get a direct link to the stories from all the countries, use this link http://www.peacecorps.gov/wws/water/africa/resources/index.html

2. All the members of your group are responsible for reading the stories. The Tracker should be keeping a list of all the URLs that you visit today so you don't waste time by revisiting sections that you've already read. The Data Transcriber should be copying quotes that you think will prove that this Volunteer should be interviewed. (You could also print the page and the Data Transcriber could highlight the sections of the stories that your group believes should be used.)

3. Keep track of your decisions on page three of your data document.

4. Before you end your work for the day, write your thoughts and feelings the Volunteers' stories in your personal journal.

5. On page two of your data document, the Data Transcriber should list which 10 photos your group will recommend and the notes about why your group chose each photo.

6. Before you end your work for the day, write your thoughts and feelings about what you have seen in the photos in your personal journal.

Days Two and Three

1. Discuss the essential questions that you must investigate. Try to reach a consensus about what they mean and the criteria for choosing photos and stories.

    How do human systems develop in response to water conditions in the physical environment?

    How do human actions with water modify the environment?

Note: You might have to discuss and decide upon a definition of physical systems and human systems before you can reach an understanding. You may use your geography textbook, the National Geographic [http://www.nationalgeographic.com/xpeditions/main.html?STST=hall] web site, or a print or online encyclopedia to assist you.

2. List your criteria for photos on page two of your data document. Then begin your search of the photos from the countries you have chosen to investigate.

3. Your deliverable to Peace Corps is a list of no more than 10 photos from the countries you investigate. Will you find all the photos related to your topics and then choose the 10 best or will you make a final decision on each photo as you look at it? Start at http://www.peacecorps.gov/wws/water/africa/resources/index.html

4. The Tracker should list all the photos that your group considered so you don't duplicate your work.

Process

Day One

1. Each group will have three participants each with a different job function. The jobs will rotate daily, so each person will eventually have completed each function. The job functions are Navigator—the person who is in charge of the computer keyboard and mouse; Data Transcriber—the person that takes notes on the data collection sheet; and Tracker—the person that makes lists the names of the Volunteers whose stories are read, and the identifying numbers of the photos that have been reviewed.

2. Using the home page for the Water in Africa Web site, choose five countries from the map showing where Peace Corps Volunteers serve. These will be the countries where you collect your data. You must visit at least four of these five countries. You should try to choose the countries carefully so you don't have to make changes mid-way through your project. You may want to consider a regional view of Africa by choosing countries that are all in the same region, or you may want to show contrast between regions by choosing countries that are in different regions on the continent. For more help in understanding the regions of Africa, consult your geography textbook, an encyclopedia, or an online encyclopedia.

3. As a group, complete the first page of your data sheet and be ready to report to the class on the plans you developed to complete your web quest.

Tasks

You will work on a team of three students to:

1. Visit the Water in Africa Web site, to read the stories and review the images
2. Collect data about how people have created systems to deal with their water resources and how the systems they have created have impacted the environment.
3. Record your own impressions and reflections about the images and stories you read in a personal journal.
4. Create a document and/or media presentation for the Peace Corps that includes:

- A list of countries that you feel should be used to depict the relationship between physical systems, human systems, and the environment.
- A list of no more than 10 photos from your chosen countries that illustrate the physical/human systems and the environmental question.
- The names of no more than five Volunteers that you believe should be interviewed further based on quotes that you present to Peace Corps from their stories on the Water in Africa Web site.
- A two-page report that describes the procedures your group used, and gives the rationale behind your recommendations of countries, photos, and Volunteers.

Water Safari: A Journey of Life

A WebQuest to the Water in Africa Web Site

Introduction

Tasks

Process

Resources

Evaluation

Introduction

Congratulations! You have been by chosen by the United States Peace Corps to conduct an investigation about how water affects the lives of Peace Corps volunteers living in Africa. Using the resources on the Water in Africa Web site, you will visit at least four countries and seek answers to the following essential questions:

> How do human systems develop in response to water conditions in the physical environment?
>
> How do human actions with water modify the environment?

Your findings will assist the Peace Corps to create a training video that volunteers to Africa will view as part of their initial training. Your deliverables to Peace Corps will include several lists of recommendations and the reasons for each of your recommendations.

Water Safari: A Journey of Life
Data Collection Document

Directions: Complete these planning charts and be prepared to explain to the class how you made your group decisions. Remember that the Jobs are Navigator, Data Transcriber, and Tracker, and that you should rotate these functions on a daily basis. Day One will be the day on which you begin your Water Safari data collection.

Group Name			
Group Members' Names			
Job Function On Day One			
Job Function On Day Two			
Job Function On Day Three			
Job Function On Day Four			
Job Function On Day Five			
Job Function On Day Six			
Job Function On Day Seven			

Countries That Our Group Will Investigate	**Region In Which This Country Lies**	**Number Of Volunteers Who Wrote About This Country**	**Number Of Photos About This Country**	**Reason For Choosing This Country**

Other Notes:

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Water Safari: A Journey of Life
Data Collection Document

Write at least two criteria that you will use to help you choose your photo recommendations, for example, the photo must represent a system and not a rare or isolated incident. You should decide how many of the criteria the photos have to meet to be included in your list of recommended photos.

Photo Criteria:

1. The photo must represent a system and not a rare or isolated incident.

2.

3.

4.

Recommended photos:

Country	Photo Number	Reason for choosing this photo

Water Safari: A Journey of Life
Data Collection Document

The following Volunteers should be interviewed to get more of their experiences about physical and human systems for the Peace Corps video:

Volunteer's Name	Country of Service	Quotation

Water Safari: A Journey of Life
Data Collection Document

1) Our group
   a) Who we are

   b) What jobs each of us had

   c) How we made decisions

2) Our Procedures
   a) How we developed criteria

   b) How we chose photos

   c) How we reviewed stories

   d) How we chose quotations

3) **The rationale for our recommendations**
   a) **Why we made our country recommendations**

   b) **Why we made our photo recommendations**

   c) **Why we made our Volunteer recommendations**

4) **Recommendations**
   a) **Countries**

   b) **Photos**

   c) **Volunteers**

Evaluation of Your Recommendations to Peace Corps

Group Name _____

Group Members _____

Area	Points	Descriptors
Content Accuracy	/20	The students: • Showed by their completion of the data document that they have an understanding of the physical and human characteristics of places
Content Depth	/40	The students: • Showed by their choice of photos and quotations that they had an understanding of how human systems develop in response to water conditions in the physical environment • Showed by their choice of photos and quotations that they had an understanding of how human actions with water modify the environment.
Process	/30	The students: • Participated in all job functions cooperatively • Used the general skills and strategies of the writing process to complete the report (pre-writing, drafting and revising, editing and publishing) • Used complete sentences, parts of speech, spelling, punctuation and capitalization appropriately
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Creativity	/5	The students: • Produced an attractive and unique cover for the report
Total	/100	Comments:

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